

REMARKS / ARGUMENTS

I. General Remarks and Remarks Regarding the Restriction Requirement

Please consider the application in view of the following remarks.

On June 30, 2005, during a telephone conversation with the Examiner, claims 1-14 were provisionally elected in response to the Examiner's restriction requirement. This provisional election is hereby confirmed and claims 15-29 have been cancelled. Applicants respectfully reserve the right to present the cancelled claims in one or more divisional applications.

II. Disposition of Claims

Claims 1-14 are pending in this application. Claims 15-29 have been cancelled herein.

Claims 1 and 4-13 have been amended herein. These amendments are supported by the specification as filed.

Claims 4-13 stand rejected under 35 U.S.C. § 112. Claims 1, 2, and 14 stand rejected under 35 U.S.C. § 102(b). Claims 3-13 stand rejected under 35 U.S.C. § 103(a).

III. Change of Inventorship

Due to the cancellation of claims 15-29 in this Response, Applicants have submitted herewith a request under 37 C.F.R. 1.48(b) to correct the inventorship of this application to list Philip D. Nguyen as the sole inventor, and remove Rick D. Gdanski as an inventor on this application. Applicants also have authorized the Commissioner herein to debit the appropriate fee of \$130.00 as required under 37 C.F.R. 1.17(i) from the deposit account of Halliburton Energy Services, Inc.

IV. Objections to the Specification

The Examiner has objected to the specification on the grounds that the specification fails to include either a Brief Description of the Several Views of the Drawings or any reference to Figure 1 in the Description of Preferred Embodiments. (*See* Office Action at ¶ 5.) Applicants respectfully assert that the Description of Preferred Embodiments does refer to Figure 1 in paragraph [016], describing Figure 1 as showing "a highly idealized visualization of how acid may penetrate into the near well bore area to create a series of intricate and symmetrical wormholes that may act as an extending treatment of the present invention." (*See* Detailed Description of Preferred Embodiments at ¶ [016].) Also, Applicants have amended the

specification in this Response to add a Brief Description of the Figures, as requested by the Examiner. Accordingly, Applicants respectfully request the withdrawal of the objections to the specification.

V. Rejections of Claims

A. Rejections of Claims Under 35 U.S.C. § 112, Second Paragraph

Claims 4-13 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

First, the Examiner writes that these claims are deemed indefinite as being drawn to improper Markush groupings. (*See* Office Action at ¶ 7.) Although Applicants believe that the language in the claims was sufficiently definite, Applicants have amended claims 4-13 in this Response in accordance with the Examiner's request. Therefore, Applicants respectfully request the withdrawal of these rejections.

The Examiner has also stated that claim 12 is deemed indefinite in that it is not clear what is meant by the term "HT." (*See* Office Action at ¶ 7.) Although Applicants believe that this language was sufficiently definite, Applicants have amended claim 12 in this Response to use the term "high-temperature" instead of "HT." Therefore, Applicants respectfully request the withdrawal of this rejection.

B. Rejections of Claims Under 35 U.S.C. § 102(b)

Claims 1, 2, and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0070020 by Philip D. Nguyen ("*Nguyen*"). With respect to this rejection, the Examiner writes that:

[*Nguyen*] (note [0018-[0020] and Figures 2, 3) discloses a process of strengthening, consolidating and eventually fracturing a subterranean formation including steps of hydrazetting a slot in the formation, injecting a hardenable resin composition into the slot and surrounding formation (note Figures 2, 3), and allowing the resin to set or cure.

Insofar as the hardenable resin composition clearly penetrates into the formation matrix surrounding the slot(s) in the process of [*Nguyen*], it is deemed such resin formulation is inherently characterized as having a viscosity as recited in claim 1.

(See Office Action at ¶ 9.) In order to form a basis for a rejection under 35 U.S.C. § 102(b), a prior art reference must disclose each and every element as set forth in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2004). In this Response, Applicants have amended claim 1 to recite the step of hydrajetting a plurality of slots substantially uniformly around the circumference of the well bore in the zone of interest. Applicants respectfully submit that *Nguyen* does not teach or suggest this limitation. Rather, *Nguyen* only teaches forming two “opposed openings” or slots in a “bi-wing” configuration. (See *Nguyen* at ¶ [0018] & Figs. 1-3 (elements 14). Applicants therefore respectfully assert that *Nguyen* does not disclose the methods recited in claim 1, as amended herein, and thus this claim is patentable over *Nguyen*. Moreover, since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 2 and 14 depend from claim 1, these dependent claims are allowable for at least the same reasons. See 35 U.S.C. § 112 ¶ 4 (2004). Accordingly, Applicants respectfully request the withdrawal of these rejections.

C. Rejections of Claims Under 35 U.S.C. § 103(a)

1. Rejections Over *Nguyen* in View of U.S. Patent No. 4,042,032

Claims 3-10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nguyen* in view of U.S. Patent No. 4,042,032 to Anderson *et al.* (“*Anderson*”). (See Office Action at ¶ 12.) To form a basis for a § 103(a) rejection, a combination of prior art references must teach or suggest each element in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2142 (2004). As discussed in Section V.B. above, *Nguyen* does not teach or suggest a method that includes the step of hydrajetting a plurality of slots substantially uniformly around the circumference of the well bore in the zone of interest, as recited in claim 1. Nor does *Anderson* teach or suggest this limitation, as *Anderson* merely teaches methods of consolidating subterranean formations using consolidating fluids (*i.e.*, hardenable organic resins) having certain compositions. (See *Anderson* at col. 2, ll. 47-64.) Because the combination of *Nguyen* and *Anderson* does not teach this element of claim 1, the combination cannot obviate claim 1. Since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claims 3-10 and 12 depend, either directly or indirectly, from claim 1, claims 3-10 and 12 include the limitations of claim 1 that neither *Nguyen* nor *Anderson* teaches or suggests. See 35 U.S.C. § 112 ¶ 4 (2004). Therefore,

Applicants respectfully assert that claims 3-10 and 12 are allowable over the combination of *Nguyen* and *Anderson*, and respectfully request the withdrawal of these rejections.

2. Rejections Over *Nguyen* in View of *Anderson* and U.S. Patent No. 4,842,072 or U.S. Patent No. 5,712,314

Claims 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nguyen* in view of *Anderson*, and further in view of U.S. Patent No. 4,842,072 to Friedman *et al.* ("*Friedman*") or U.S. Patent No. 5,712,314 to Surles *et al.* ("*Surles*"). To form a basis for a § 103(a) rejection, a combination of prior art references must teach or suggest each element in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2142 (2004). As discussed in Section V.B. above, *Nguyen* does not teach or suggest a method that includes the step of hydrajetting a plurality of slots substantially uniformly around the circumference of the well bore in the zone of interest, as recited in claim 1. As discussed in Section V.C.1. above, *Anderson* does not teach or suggest this limitation. Nor do *Friedman* or *Surles* teach or suggest this limitation. *Friedman* and *Surles* merely teach the use of polymerizable resins (e.g., furan and furfuryl alcohol hardenable resins) in consolidating subterranean formations and creating resin plugs. (See *Friedman* at col. 5, ll. 27-43; *Surles* at col. 3, l. 65 - col. 4, l. 19.) Because no combination of *Nguyen*, *Anderson*, *Friedman*, and *Surles* teaches this element of claim 1, the combination cannot obviate claim 1. Since "a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers," and since claims 9 and 11 depend, either directly or indirectly, from claim 1, claims 9 and 11 include the limitations of claim 1 that none of *Nguyen*, *Anderson*, *Friedman*, and *Surles* teach or suggest. See 35 U.S.C. § 112 ¶ 4 (2004). Therefore, Applicants respectfully assert that claims 9 and 11 are allowable over all combinations of *Nguyen*, *Anderson*, *Friedman*, and *Surles*, and respectfully request the withdrawal of these rejections.

3. Rejections Over *Nguyen* in View of *Anderson* and U.S. Patent No. 3,857,444

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nguyen* in view of *Anderson*, and further in view of U.S. Patent No. 3,857,444 to Claude T. Copeland ("*Copeland*"). To form a basis for a § 103(a) rejection, a combination of prior art references must teach or suggest each element in the claim. MANUAL OF PATENT EXAMINING PROCEDURE § 2142 (2004). As discussed in Section V.B. above, *Nguyen* does not teach or suggest a method that includes the step of hydrajetting a plurality of slots substantially uniformly

around the circumference of the well bore in the zone of interest, as recited in claim 1. As discussed in Section V.C.1. above, *Anderson* does not teach or suggest this limitation. Nor does *Copeland* teach or suggest this limitation, as *Copeland* merely teaches the use of certain epoxy resins for consolidating subterranean formations. (See *Copeland* at Abstract.) Because no combination of *Nguyen*, *Anderson*, and *Copeland* teaches this element of claim 1, the combination cannot obviate claim 1. Since “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers,” and since claim 13 depends from claim 1, claim 13 includes the limitations of claim 1 that none of *Nguyen*, *Anderson*, and *Copeland* teach or suggest. See 35 U.S.C. § 112 ¶ 4 (2004). Therefore, Applicants respectfully assert that claim 13 is allowable over all combinations of *Nguyen*, *Anderson*, and *Copeland*, and respectfully request the withdrawal of this rejection.

SUMMARY

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

The Commissioner is hereby authorized to debit the Deposit Account of Halliburton Energy Services, Inc., No. 08-0300 in the amount of \$130.00 for the fee for the correction of inventorship under 37 C.F.R. 1.17(i). Should the Commissioner deem that any additional fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to the Deposit Account of Halliburton Energy Services, Inc., No. 08-0300.

Respectfully submitted,



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